PROCEEDINGS

OF

THE ROYAL SOCIETY.

June 17, 1869 (continued).

X. "On a Group of Varieties of the Muscles of the Human Neck, Shoulder, and Chest, with their transitional Forms and Homologies in the Mammalia." By JOHN WOOD, F.R.C.S., Examiner in Anatomy at the University of London. Communicated by Dr. SHARPEY, Sec. R.S. Received June 17, 1869.

(Abstract.)

THE muscular varieties described by the author in his paper comprise the *occipito-scapular*, the *levator claviculæ*, and the *cleido-occipital*, among the muscles which elevate the scapulo-clavicular bone-arch; the *sterno-scapular*, the *sterno-clavicular*, and the *scapulo-clavicular*, of those which depress it; and the *supracostal*, placed upon the upper part of the thorax.

The human *occipito-scapular* was first observed and described by him in the Proceedings of the Royal Society in 1867. Since that time various developments of muscular slips connected with the *splenii*, *levator anguli scapulæ*, and *serrati* have been observed, and are described and figured as a series of varieties transitional from the *occipito-scapular* behind to the *levator claviculæ* in front of the neck. The homology of the *occipito-scapular* with the *levator scapulæ minor vel posterior* of Douglass, the *rhomboideus capitis*, *rhomboïde antérieur* of Meckel, and the *rhomboïde de la tête* of Cuvier, is traced in the different orders of the Mammalia, from direct observation, in the following animals, viz. the Bonnet-Monkey, the Hedgehog, Mole, Dog, Cat, Badger, Weasel, Rabbit, Guineapig, Norway Rat, and Squirrel, of which drawings from dissections accompanied the paper; and also from various authorities in reference to a considerable number of other animals.

The *levator claviculæ* he described in reference to its animal homologies

in his paper read before the Royal Society in 1864; he has found it in 6 out of 202 subjects. In the present paper the author gives an abstract of the observations of the older and modern anatomists referring to this muscle in the human subject under various names, and enters at length into its homologies in the Mammalia, as described by writers under its synonyms,—the *levator scapulæ major vel anterior* (Douglass), *omo- ou acromio-trachélien* (Cuvier and Meckel), *acromio-basilar* (Vicq d'Azyr), *basio-humeralis* (Krause), *Kopf-Arm-Muskel* (Peyer), *clavio-trachélien* (Church), *transverso-scapulaire* (Strauss-Dürckheim), *omo-atlanticus* (Haughton), and *cervico-humeral* (Humphry),—illustrating them by drawings from his own dissections. He enters more fully into the discussion of the apparently anomalous composition of the muscle in the Rabbit, gives reasons and comparative illustrations from the Fallow-deer and Ass for considering the seeming doubling of the muscle to result from a peculiar development of the *cleido-mastoid* in apparent conjunction with it, and considers that the muscle which has gone under the last name in the Rabbit to be really a development of the *cleido-occipital.*

The *cleido-occipital* he described in his paper published in the Proceedings of the Royal Society in June 1866; and he has found it since that time in 37 out of 102 subjects. In the present paper he quotes briefly the various anatomists who have described it as part of the *sterno-cleido-mastoid* or *trapezius,* and connects it homologically with the muscles which have been described in the claviculate mammalia as a second *cleido-mastoid,* and in the semiclaviculate as the *trapezius clavicularis* ("*portion cervicale*") of that muscle, giving illustrations of its gradual or transitional forms of development from specimens that have come under his own observation, or which have been gathered from the writings of others, as far as to the formation of the compound *cephalo-humeral* or *levator humeri* muscle of the Rodents and Carnivora.

The *sterno-scapular* muscle was first described as a variety in the human subject by the author in his paper published in the 'Proceedings' in 1865; it had been previously described by various anatomists and by himself as a double *subclavius,* with an insertion into the scapula. In the present paper he briefly quotes these authorities, and shows the various developments of the muscle in animals. In connexion with it he describes a *scapulo-clavicular* variety (first observed by him as a human variety in 1865), and compares it with the human abnormalities described by authors as varieties of the *omo-hyoid.* It is described by Cuvier as the "*scapulo-clavien*" in the Rat-mole of the Cape and in the *Didelphis marsupialis,* and has been found by the author in the Rabbit, Guineapig, Squirrel, and Norway Rat.

He also describes the specimens he has found of the *sterno-clavicular* muscle, mentions the observers who have before seen it and recognized its homologies, and gives illustrations of its formation in the Rabbit, Guinea-pig, and other animals.

The *supra-costal* muscle was first discovered and described and figured

by the author in his paper published in the 'Proceedings' in 1865, and was again noted and recorded by him in 1867; it has also been observed in the human subject by Professor Turner and others, and is considered by the former to be the representative of the *rectus thoracicus* of animals The author, however, is of opinion that the muscle figured by Cuvier as the *sterno-costal* in animals is a better fitting homology, and gives in this paper illustrations from his own dissections in animals in support of this view.

XI. "Results of the first year's performance of the Photographically Self-recording Meteorological Instruments at the Central Observatory of the British System of Meteorological Observations." By Lieut.-General Edward Sabine, R.A., President. Received June 17, 1869.

Before the Fellows of the Society disperse for the long vacation, I am desirous to bring under their notice the results of the first year's performance (January 1 to December 31, 1868) of the photographically self-recording meteorological instruments established at Kew, the Central Observatory of the British Meteorological System instituted by the Board of Trade and superintended by a Committee of Fellows of the Royal Society.

The photograms, with tabulations carefully prepared from them, are transmitted monthly by Mr. Stewart, the Superintendent of the Kew Observatory, to Mr. Scott, the Director of the Meteorological Office in London, where the results are computed and embodied in Tables, of the nature of those which are now presented.

The first of these Tables shows the *Diurnal Variation*, or the values of the phenomena at each of the 24 hours, on the mean of the year. It exhibits

1st. The Temperature.

2nd. The Elasticity of the Aqueous Vapour.

3rd. The Barometric Pressure.

4th. The Pressure of the Dry Air.

5th. The Humidity.

In meteorology and climatology much instruction may often be derived from tracing the modifying influences of diversities of situation; and I have thought that these Tables might be made more acceptable and interesting to the Society, and the subject be advantageously illustrated, by the addition of corresponding results for two other stations, which are very nearly in the same geographical latitude as Kew, but are very differently situated in other respects, being in the interior of the European and Asiatic continent—thoroughly continental therefore, and as such contrasted with our insular British stations. Nertchinsk and Barnaoul, both in Siberia, are two of the stations of the great Russian system of observatories, established by our